

May 80

Lakehead amateur radio club

# HIGH-Q

## NEXT MEETING MAY 8

The next regular meeting of the LAKEHEAD AMATEUR RADIO CLUB (inc) will take place at the EMO BUILDING at 8:00 p.m. May 8.

Increased attendance will be greatly appreciated at this meeting as suggestions are needed as well as volunteers for certain activities concerning the annual Legion Road Race, and Field Day which is only one month away.

A series of films on antenna fundamentals has been ordered for the club meeting. These should be here for the June meeting.

This past month the LARC was in the public eye when they had a booth set up in the K-MART plaza. This was set up for three days, April 24, 25 and 26. It was a great success as many people stopped to look at the display and ask questions on ham radio. The display varied from day to day depending on the people that could help or donate their equipment. The clubs hf gear was on display as well as the two meter rig in operation.

It was unfortunate that we were not able to have an operating HF station due to the fact, there was no way to run coax to the roof or anywhere outside the building. We were perhaps OVERLY OPTIMISTIC in thinking that the Radio Shack outlet would let us use their feed line for a short time to have the HF unit in operation. The manager did not wish to co-operate, feeling that he needed this feedline in case a customer wanted to have a demonstration in the stores gear. The fact that we were trying to encourage ham radio and electronics and possibly bring in customers for his did not help. (I think that from now on I will go to the other RS stores in town for my gear ...)

On Thursday, we had on display, courtesy of John VE3-HTM the micro-computer (RS brand at that) decoding the CW to a video display. On Friday we had a SSTV unit in operation, using taped reception to display pictures on the screen. This brought a lot of people to the area, as upon hearing the tones there were surprises to know that they were being converted to video. On Saturday, the touch-tone in conjunction with John VE3-HTM's computer showed what could be done in that department. During the three days, there was a slide projector with many slides of the area hams in action as well as an audio track promoting the different facets of ham radio. The back drop was a display of QSL cards, awards and explanations of the hobby. Homebrew equipment was also on display. Those involved in the display were Bob VE3-IDJ, Mike VE3-HZW, Vic VE3-JAR, Gary VE3-HJS and Dennis VE3-JAQ. A lot of people were asking about the next ham classes, so there must have been some positive results of this effort. It is hoped that an event like the Lakehead Amateur Radio Club History Project carry on throughout the years.

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"TOUCH TONE MADNESS" by JOHN, VE3HTM

If you have a Touch Tone Pad sitting in the wings waiting for the new auto - patch repeater to come on stream, now is the time to dust it off and see if it will actually work.

For the past number weeks I have been working on a " TEST PAD " facility that can be accessed through the repeater. It had been suggested by some that we have something available to try out our pads on. This hopefully will fill the need in a number of ways. To make use of the " TEST PAD" function, get out your Touch Tone Pad if you can still find it, and connect it to your 2 - meter rig. Then follow these simple steps.

1. PUSH and HOLD down the asterick ( \* ) button for about 2 seconds, then immediately press the digit 1
2. Listen for the words " TEST PAD " come back in CW after a few seconds.
3. The TRS - 80 computer is now waiting for you to push any of the digits on your pad.
4. Try pressing the digit number 4 and then immediately listen for the number four come back to you in CW.
5. Pressing any one of the digits will result in a CW response of that number.
6. If after 30 seconds since the last digit you sent, you don't send another signal, the computer will automatically send " de VE3HTM " in CW and terminate the " test pad " routine.
7. If you wish to terminate your testing immediately, simply press the crosshatch ( # ) button. The station ID will come on and the routine will end as above.
8. Once the " test pad " function has been accessed, pressing the \* button will give no further response other than to extend the available test period for another 30 seconds, as will any of the " Number " digits.
9. If for some reason the computer detects only ONE of the TWO tones of any digit from your encoder, the computer will respond in CW with " only high tone " or Only low tone ", whatever the case may be.

That basically is all there is to checking out your touch tone encoder on the air.

There have also been a number of queries as to when the repeater " BRAG TAPE " will be accessible again. Well, the time is NOW; all set for the tourist season.

To access this info tape simply press and hold the \* button for about 2 seconds and then immediately press the digit 2, and listen. If all went well, you should hear the recorded message begin to play, that's all you have to do. The computer will listen for the end of the message, then automatically ID and terminate the routine.

If you attempted to bring up the brag tape or the test pad routine but failed to access it properly, the computer will respond with an error message consisting of a string of " di - dahs ". If this does happen don't worry, just try again. At least you'll

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TOUCH TONE MADNESS, cont'd.

know that your \* button works OK.

It is also possible to access a direct dial auto patch function if you know the access code.

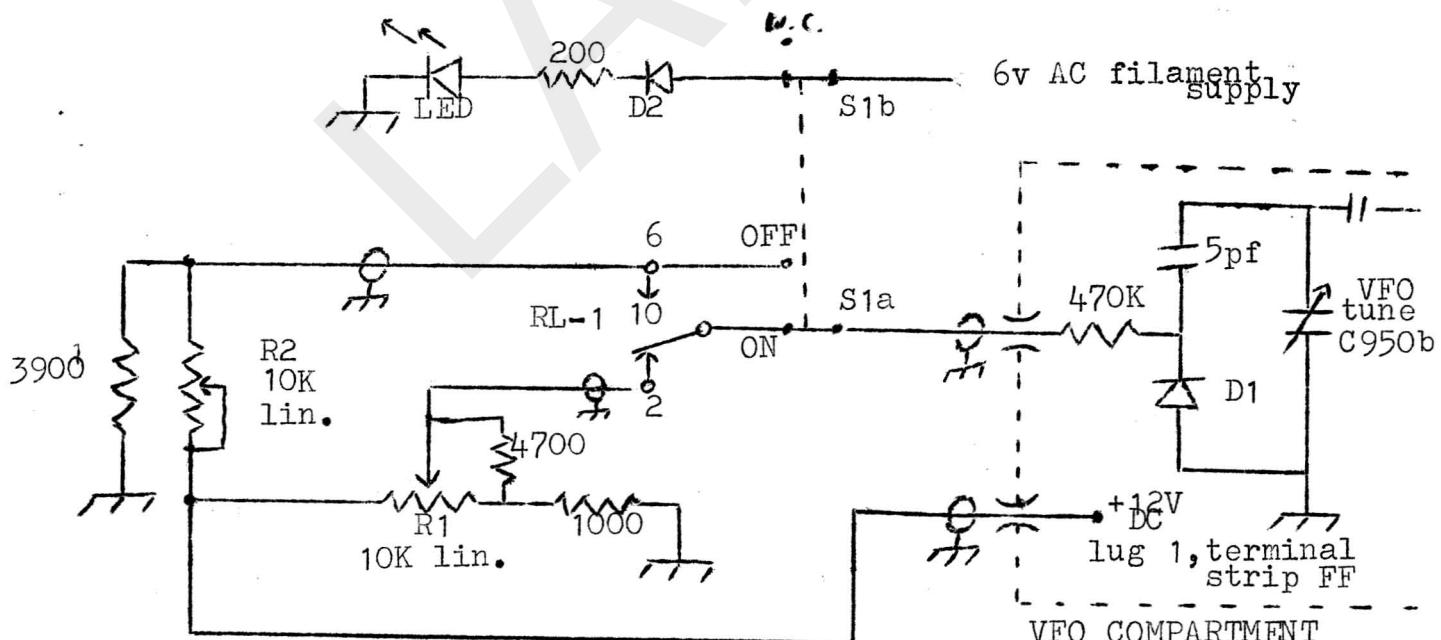
Although I established it for my own personal use(XYL prefers it that way ), if you would like to make a call on it, or just try it out, I would be happy to access it for you. If you hear me on the air just ask. It's always a nice feature to demonstrate for someone.

I am also considering the development of an emergency call - up feature possibly for use after midnight when no - one is listening. All the hardware is in place for it now. All it needs is a little software which could be written in one evening. If you have any ideas on how you would like a system like this to work, and during what time of day or night, please let me know about them.

Chow for now - DE VE3HTM

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#### INCREMENTAL TUNING FOR THE HEATHKIT HW - 101



FIXED RESISTORS ARE  $\frac{1}{2}$  watt composition  
R1 and R2 are 10K linear carbon pots.

D1 RCA SK 3126 Varactor diode

D2 50 PIV 1 amp diode ( 1N4001 or equiv )

S1 DPDT switch, rotary preferred.

Refer to the following instructions for the above modification.

Lakehead Amateur Radio Club History Project

cont'd.

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### INCREMENTAL TUNING FOR THE HEATHKIT HW- 101

RIT or receiver incremental tuning is the ability to tune a RECEIVER a small amount while leaving the transmit frequency alone.

The Heathkit HW - 101 does not come equipped with this feature, which is the reason for this modification.

The circuit shown allows the RECEIVE frequency of a HW 101 to be shifted about 3.5 KHz on either side of the transmit frequency.

The RCA SK 3126 tuning diode is connected in parallel with C 950B, the main tuning capacitor of the HW 101 VFO. Reverse bias on the diode provides a small amount of capacitance to change the freq. of the VFO by a small amount.

Regulated 12 V DC is available within the VFO at lug 1 of terminal strip FF. ( refer to pictorial 7-2 from page 43 of the HW 101 manual) Essentially we have two voltage dividers, one connected to pin 6 of RL1 ( the one closest to the antenna terminal) and used on transmit, and the other connected to pin 2 of RL1 and used on receive. The pot R1 is mounted on the front panel along with the switch. The RIT feature is disabled by effectively removing the relay from the circuit by means of S1a. S1b allows the use of a front panel mounted red LED to indicate that the RIT is ON. This is optional, but highly recommended.

### CONSTRUCTION

1. Remove the VFO from the rig following instructions on page 154 of the HW - 101 manual.
2. CAREFULLY drill two additional holes in the rear wall of the VFO below the three existing holes. ( the size of these holes depends upon the feedthroughs which you use.) Install insulated feedthroughs in these holes.(Heath part number 75 - 78)
3. Install the 5 pf capacitor, the varactor diode and the 470K resistor as indicated and connect to one of the feedthroughs. Connect the other feedthrough to lug 1 of terminal strip FF.
4. Re - install the VFO in the rig.
5. Assemble the 3900 ohm, 1000 ohm and one 10K variable resistors on a small piece of perforated board and attach to the right side of the VFO using two of the screws that hold the VFO together.
6. Drill two holes on the front panel, one on each side of the meter and level with the holes on the left side of the frequency readout. A mini - box could also be used and installed outboard instead of drilling holes. Drill an additional hole if you are using an LED to indicate that the RIT is ON.
7. Mount the 4700 ohm resistor on the centre and right hand terminal of R1 and install R1 and the switch on the front panel.
8. Complete the remaining connections using RG/174U miniature coax where indicated. The 6v AC for the LED can be obtained at one of the panel lamps; D2 and the LED must be orientated in the same direction. You may have to change the value of the 200 ohm resistor to suit your LED

Cont'd.

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RIT for the HW 101 cont'd.

9. Set both pots to about the middle of their rotation and then realign the VFO as per page 121 of the HW 101 manual.
10. Adjust the R1 so that it is halfway through its rotation and place a knob on it so that the pointer is straight up.
11. Tune a steady carrier signal ( the calibrator ) and adjust R2 so that the note sounds the same with the RIT switch on or off.
12. Check any signal. You should be able to move it with the RIT pot when the switch is on, but not when it's off.
13. The new controls on the front panel can be labelled with some rub - off lettering which can be protected with a coat of clear lacquer.

This RIT modification has been in use at VE3EZU for nearly a year now with no problems and greatly increased enjoyment.

Article by John Scott, VE3EZU  
reprinted from April issue

TCA - The Canadian Amateur.

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Heard by well known ears ! ! ! that Ray EDZ has his hombrew HF receiver up and running on all bands. This is the first part of his all solid state transceiver. Keep up the good work Ray, not too much ambition like that around now a days.

\* \* \* \* \*

Ken EFZ has his 6 meter transverter up and putting out about 27 watts. A new tube works wonders!

\* \* \* \* \*

LEO, VE3EFQ sold his 2 - meter transceiver and bought some SSTV gear, the Robot 70 monitor and 80 camera, looks like IDJ may have somebody to talk to after all in the Bay!.

\* \* \* \* \*

Bill, EFC finally put KIM in a box, I think he is afraid his XYL figured he was spending too much time with it(her?)

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Thanks to all who helped out at the MALL the weekend of the 24, 25, 26.

There were lots of questions and many people anxious to attend classes next fall! See ~~that amateur radio history project~~ on the local TV stations really worked.

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## MORE WOODPECKER

All of us have heard the so called WOODPECKER. For the past few years, almost everyone using the ham bands has been affected to some degree. The following is an extract from the newsletter of the Planetary Association for Clean Energy, via the 'Ontario Amateur'.

1976 and 1977 were years of unusual phenomena. It started in the spring and summer of 1976 with electro-magnetic emissions originating in the USSR and powerful enough to block out BBC broadcasts, along with amateur and other telecommunications systems in Europe and North America. Monitoring arranged by the Planetary Association for Clean Energy in Canada and USA provided photographs of oscilloscope patterns and other data which established that these emissions could penetrate Faraday cages. It also indicated that the fundamental wave was of Extremely Low Frequency (ELF) and capable of affecting brain waves in human beings. Indeed a number of persons were found who suffered severe headaches, nausea and other symptoms simultaneously with these emissions. Sometimes these emissions were accompanied at night by a bluish fluorescence in the sky and by small radius displays similar to the aurora. In some parts of Britain the fluorescence was accompanied by a humming sound. Incidentally the same sights and sounds accompanied the huge power failure in New York of July 1977.

Other phenomena that took place in the same period, coincidentally with the Russian emissions, were a series of earthquakes and striking weather pattern changes in various parts of the world. Earthquakes occurred in China on July 28 1976 taking 650,000 lives, in the Philippines on August 16 and in Eastern Turkey on November 24. For example the Chinese earthquake was accompanied by fluorescence, the hum and radio interference blocking the short wave band.

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The following is from new club member Gord Woroshelc, VE3-EYW. He has the following items for sale.

Wilson Mark II, 2 meter HT c/w Nicads, charger and TT pad. 5 channels installed. New rubber duck.

KLM 2 meter power amplifier, 15-160BL, up to 160 watts output.

ICOM 2 meter all mode transceiver, IC-211. Just back from Hamtronics for a complete overhaul and tuneup. Will go cheap.

HF mobile antenna, MT-1 Antack. Fully adjustable 80 to 10 meters. Great for new bands. Used only a few times. Four months old.

The price on all the above is negotiable. Please contact Gord Woroshelc VE3-EYW, General Delivery, Manitouwadge, Ontario P0T-2C0 Telephone business 807-826-3211 Ext 396 or home at 826-4231.

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NOTICE TO L.A.R.C. MEMBERS

It has been proposed that we set up an emergency NET for local use, here in Thunder Bay and the surrounding district.

This would involve all members to the extent that your name and phone number would be on the call out list. This does not mean you are obliged to sit at home waiting for a call, or mean, that you must take part in an emergency, should one arise. What it does mean, however, is that you could or would be called and informed of the emergency, and asked if you could spare the time to help out.

If your answer is no, then you might be asked to make one or two phone calls to other members. Again if this is not possible, the caller would go on to the next person on the list.

We realize that work, former commitments, XYL's would play a large part in your participation. But, we also know that enough volunteers would come forward to make this work.

The call out system would be simple. The Executive would be responsible for starting the callout on instructions from the EMO director Mr Fallon, the police or other emergency personnel. They in turn would call a member and ask him to call other members, not more than 5 or 6 at the outside. The last man called on the list would then call 5 or 6 others. Thus you would not be tied up with phone calls.

As you are aware there are a large number of older members and members who do not come out to the meetings. We would like to have their services as monitors on 2 meters, letting us know the times they could be available for this service. A call on 2 meters would also do.

Nights are the problem times as well as early mornings. How many times have you called and received NO answer? Wouldn't it be nice to know someone was listening if you had a problem?

The people monitoring could make a call and help is on the way. Think about it. It could be you needing help.

All we want is your willingness to participate. Please let us know by writing, saying yes at the next meeting, or calling on 2 meters.

Please say YES. Get this off the ground. WE NEED IT.

..... Arnold VE3-JAA

In order to meet our publishing deadline, the minutes of the last general meeting will not be available for printing in this issue. You will just have to go to the next meeting to find out what happened at the last meeting.

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" CALLING ALL COMPUTNIKS " by VE3HTM

For the past few months a number of persons have shown interest in establishing some regular get to-gathers for those with computers. The HAM community is slowly becoming more involved with micro-computers and finding all sorts of new applications for them.

The biggest questions usually involve, WHAT you can do with a micro - computer, and of course HOW to do it.

Hopefully some regular meeting of the minds will help answer the whats and hows when it comes to micro - computers, therefore on Thursday, MAY 15, 1980 in the EMO building at 7:30 p.m., we've planned to have an evening session to discuss possibilities for the future.

For this first meeting I hope to lead a short discussion and demonstration on HOW to instruct your computer by remote control using ham radio. I also hope to cover some of the "hows" related to real world interfacing hardware, and also have a short discussion on some of the software aspects.

If you think an evening like this would be of interest to you, and are anxious to explore new horizons with your micro - computer, come on out and join us.

TIME: 7:30PM DATE: THURSDAY, MAY 15, 1980 PLACE: EMO Building.

John, VE3HTM

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FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE FOR SALE

1 - HEATHKIT IMPEDANCE BRIDGE - Model IB2A

1 - HEATHKIT Q- METER - Model QM1

First \$100 takes both

1 - GENERAL RADIO SIGNAL GENERATOR, Model 1021

50 to 260 MHZ -- Will trade, swap, sell for money - Negotiable contact Laurie, VE3BCD at 622 - 1628 for any or all of above items.

\* \* \* \* \*

1 - SWAN 700CX, power supply and a speaker.

plug in SWAN - VOX, PHONE PATCH and 16 pole FILTER

1 - HR 60 RECEIVER c/w coi ls for 7.0 to 28 MHz.  
Bandspread and general coverage. - \$ 230

Contact LEO, VE3EFQ at 344 - 3088

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We will accept ANY for sale item for publishing FREE of charge. Call MIKE, VE3HZW or BOB, VE3IDJ with details. It is YOUR CLUB newsletter.

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WANTED WANTED WANTED WANTED WANTED WANTED

1 - Vibroplex BUG, Call Bob VE3IDJ at 767 - 6541.

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The department of Communications District Office in Thunder Bay will be participating in the Annual Trade Show to be held at the Lakehead Exhibition grounds on May 8, 9 and 10, 1980. A direct Broadcast Satellite Earth Station terminal will be operating and a Telidon demonstration will also be featured. All are invited to stop by for a look at some of the new technology coming on stream.

#### ILLEGABLE STATION?

Another of our local presently inactive Amateurs, VE3-JAX, George recently received a batch of QSL cards in the mail. Most are DX cards, with one from VE3 land and one from KB8. Most of the cards are for operation between April 1st and November of 1979, and show that the VX3 prefix was used. None of the cards show an operator name or any other information. Can the Amateur community help us should this call be heard again?

#### THE APRIL EXAMS

The April 16, 1980 session of Amateur Exams has produced two new licensed Amateurs and at least one Advanced Amateur in the local area. A total of nine candidates attended the exam, one digital, five Amateur and three Advanced Amateur. Results on the digital exam will not be known for some time. There were two immediate pass marks on the Amateur and one on the Advanced Amateur.

Several applications for the June 18 exam have already been received; please remember that the cut-off date for application will be May 16.

After this date there will not be another exam until the fall time with the date scheduled as October 15.

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#### HAMS IN THE NEWS.....via CARF

The Canadian occupational forces base at Ismailia, Egypt closed down on October 22 of last year. The Amateur radio station on the base racked up some 47,000 phone patches to families in Canada during the six years of operation. There were 12000 of them from January 1, 1979 to shutdown. The commanding Officer of the base has expressed his appreciation to the many Canadian Hams from coast to coast for their part in the operation.

OPERATION BY CANADIAN AMATEURS on 75 meters between 3959 and 4000 khz is likely to be eliminated as a result of the CBC's plan~~s~~ to use two frequencies in that range for internal shortwave broadcasts. The CBC hopes to have 250 kilowatt transmitters operating on 75 by mid 1981. ....via CARF

Our secretary-treasurer came up with a bit of bad luck while roller skating a while back. As a result he is in a cast and is not quite 'mobile'. Stan VE3-KRM was in the hospital for a few days but is now home with a cast on his leg.